

Kernel Priority Matrix

5.0 betaPriority	Service / Capability	Document Ref	Section Ref	Comment	Note(s)	PSE54	PSE52
Segment Development Tools SRS (an '*' in the section reference indicates that the item refers to all subsidiary items as well)							
2	Additional RT Descriptors	Segment Development Tools	4.1.*	modifications noted in 5.0 beta development tools build list			
-	Integration Directory & Notes	Segment Development Tools	4.2 & 4.2.1	currently provided, no changes required			
-	VSOOutput	Segment Development Tools	4.2.2	currently provided, no changes required			
2	General Segmentation Tool Requirements	Segment Development Tools	5.1.1	Tools will be provided for current reference platforms (Solaris 7, NT 4.0, and HP 10.20). DISA will revise operating system versions when kernel development changes operating system version.			
-	FindServices Tool	Segment Development Tools	5.1.2	DISA will not provide at this time			
-	FindUnits Tool	Segment Development Tools	5.1.3	DISA will not provide at this time			
2	VerifyRTSeg Helper Function	Segment Development Tools	5.1.4	modifications noted in 5.0 beta development tools build list			
2	VerifySeg Tool	Segment Development Tools	5.1.5	currently provided, no changes required			
-	CkRTCompliance	Segment Development Tools	5.1.6	DISA will not provide at this time			
-	ChkCompliance Tool	Segment Development Tools	5.1.7	currently provided, no changes required			
-	TimeStamp Tool	Segment Development Tools	5.1.8	currently provided, no changes required			
-	MakeInstall	Segment Development Tools	5.1.9	currently provided, no changes required			
-	CanInstallOnIE	Segment Development Tools	5.1.10	DISA will not provide at this time	10		
-	CanInstallTool	Segment Development Tools	5.1.11	currently provided, no changes required			
Integration Tools SRS (an '*' in the section reference indicates that the item refers to all subsidiary items as well)							
-	RT Integration Platform	Integration Tools		DISA is considering, will not be provided in 5.0 beta	1		
2	General Requirements for Integration Tools	Integration Tools	4.1				
-	RT Kernel & Build Tool Installer	Integration Tools	4.2.1	DISA is considering, will not be provided in 5.0 beta	1		
-	RT COE Segment Installer	Integration Tools	4.2.2.*	DISA is considering, will not be provided in 5.0 beta	1,2		
2	Segment Dependency Database	Integration Tools	4.2.2.4	modifications noted in 5.0 beta integration Tools Build List			
3	Configuration Analysis Tool	Integration Tools	4.3.1.*	modifications noted in 5.0 beta integration Tools Build List	14		
2	RT COE Segment Selector	Integration Tools	4.3.1.1	modifications noted in 5.0 beta integration Tools Build List	11		

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-	RT Kernel Services Selector	Integration Tools	4.3.1.2	DISA believes this tool is no longer needed. See notes in 5.0 beta integration tools build list.	3,11		
2	RTOS Functionality Selector	Integration Tools	4.3.1.3	modifications noted in 5.0 beta integration Tools Build List	4,11		
2	RTConfig File	Integration Tools	4.3.2	modifications noted in 5.0 beta integration Tools Build List			
Kernel Services SRS (an "*" in the section reference indicates that the item refers to all subsidiary items as well)							
1	Repackage Kernel Services	Kernel Services-Runtime		Kernel will be repackaged into required and optional components.			
-	Packaged bundles for other O/S services	Kernel Services-Runtime	discussions with RT group	DISA does not currently envision breaking down the native O/S by services and allowing service dependencies on O/S fragments. DISA will revisit this issue after the 5.0 beta release.	3		
1	Command Line Parameters	Kernel Services-Runtime	3.2	modifications noted in 5.0 beta kernel services build list			
-	Capability Requirements for Mandatory RT DII COE Kernel Services	Kernel Services-Runtime	3.3	No software requested. Clarification of DISA position provided in 5.0 beta kernel services build list			
-	Native System Administration Tools Component	Kernel Services-System Admin	3.4.1.1	No longer part of the kernel architecture			
-	Log File Management Component	Kernel Services-System Admin	3.4.1.2	Will be part of post 5.0 beta			
1	Service Component Interface	Kernel Services-System Admin	3.4.1.3.1	see notes under 3.2			
1	System Shutdown	Kernel Services - System Admin	3.4.1.3.2.*	modifications noted in 5.0 beta kernel services build list		X	[Note 13]
1	System Reboot	Kernel Services - System Admin	3.4.1.3.3.*	modifications noted in 5.0 beta kernel services build list		X	[Note 13]
1	System Fast Reboot	Kernel Services - System Admin	3.4.1.3.4.*	modifications noted in 5.0 beta kernel services build list		X	[Note 13]
1	Service Component Interface	Kernel Services - System Admin	3.4.1.4.1	see notes under 3.2			
1	Set Local Time	Kernel Services - System Admin	3.4.1.4.2.*	modifications noted in 5.0 beta kernel services build list		X	[Note 13]
-	Time Sources	Kernel Services - System Admin	3.4.1.4.3	No software requested for 5.0 beta			
-	Disk Management	Kernel Services - System Admin	3.4.1.5.1	No software requested in 5.0 beta	5		
-	Domain Name Service - initialize & configure	Kernel Services - System Admin	3.4.1.5.2	No software requested in 5.0 beta	5		
-	Edit System Host Table	Kernel Services - System Admin	3.4.1.5.3	No software requested in 5.0 beta	5		
-	Configure Network Information Service	Kernel Services - System Admin	3.4.1.5.4	No software requested in 5.0 beta	5		
-	Configure Network Routing	Kernel Services - System Admin	3.4.1.5.5	No software requested in 5.0 beta	5		
-	Audit Logging	Kernel Services-Security	3.4.2.1	No software requested in 5.0 beta	5		
-	Set/Display Security Level	Kernel Services-Security	3.4.2.2	No longer a kernel service	7		
-	Configure Security	Kernel Services-Security		modify security settings to conform to DII COE requirements	6		

mcvittie:
modified 2/2/2000 based
on RT Telecon. Issue
should remain open for
further discussion.

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-	Login Control	Kernel Services-Security		3 strikes & deadman	6		
-	Password Management	Kernel Services-Security		change password, and password validation	6		
-	Process Management Table	Kernel Services-Runtime	3.4.3.1.1	DISA believes these to be O/S functions or services no longer provided with the DII COE 5.x kernel. See 5.0 beta kernel services build list for more information.		X	
1	Start Boot Processes	Kernel Services-Runtime	3.4.3.1.2.*			X	
-	Process Manager	Kernel Services-Runtime	3.4.3.1.3	DISA believes these to be O/S functions or services no longer provided with the DII COE 5.x kernel. See 5.0 beta kernel services build list for more information.	5,7		
1	Abort Single Process	Kernel Services-Runtime	3.4.3.1.4.*	modifications noted in 5.0 beta kernel services build list		X	
1	Abort Multiple Processes	Kernel Services-Runtime	3.4.3.1.5	modifications noted in 5.0 beta kernel services build list		X	
-	Process Administration Management	Kernel Services-Runtime	3.4.3.1.6	No longer part of the kernel architecture	7		
-	Process Launch	Kernel Services-Runtime	3.4.3.1.7.*	No longer part of the kernel architecture	7	X	
-	Restart Boot Process	Kernel Services-Runtime		Not currently part of the kernel architecture. DISA will consider post 5.0 beta			
-	Request Response	Kernel Services-User Interface Tools	3.4.3.2.1	Will be part of post 5.0 beta	5		
-	Display Message	Kernel Services-User Interface Tools	3.4.3.2.2	Will be part of post 5.0 beta	5		
-	Prompt to User	Kernel Services-User Interface Tools	3.4.3.2.3	Will be part of post 5.0 beta	5		
-	Prompt for Passwords	Kernel Services-User Interface Tools	3.4.3.2.4	Will be part of post 5.0 beta	5		
-	Profile Creation	Kernel Services - A&P	3.4.3.3.1		5		
-	Profile Switch	Kernel Services - A&P	3.4.3.3.2		5		
-	Profile Editing	Kernel Services - A&P	3.4.3.3.3		5		
-	Profiled Permissions (features)	Kernel Services - A&P	3.4.3.3.4		5		
-	Default Profile Path	Kernel Services - A&P	3.4.3.3.5	No longer part of the kernel architecture	5		
-	Profile Loading	Kernel Services - A&P	3.4.3.3.6		5		
-	User Login	Kernel Services - A&P	3.4.3.3.7		5		
-	Profile User List	Kernel Services - A&P	3.4.3.3.8		5,9		
-	User Profile List	Kernel Services - A&P	3.4.3.3.9		5		
-	User Segment List	Kernel Services - A&P	3.4.3.3.10		5,9		
-	Profile Segment List	Kernel Services - A&P	3.4.3.3.11		5,9		
-	Segment Profiles List	Kernel Services - A&P	3.4.3.3.12		5,9		
-	Segment Users List	Kernel Services - A&P	3.4.3.3.13		5,9		
-	Profile Error Notification	Kernel Services - A&P	3.4.3.3.14		5		
-	Profile Status	Kernel Services - A&P	3.4.3.3.15		5,9		

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-	Create Session	Kernel Services - A&P	3.4.3.3.16	No longer part of the kernel architecture	7		
-	Start Sessions	Kernel Services - A&P	3.4.3.3.17	No longer part of the kernel architecture	7		
-	Close Session	Kernel Services - A&P	3.4.3.3.18	No longer part of the kernel architecture	7		
-	Close User's Session	Kernel Services - A&P	3.4.3.3.19	No longer part of the kernel architecture	7		
-	Checking Sessions	Kernel Services - A&P	3.4.3.3.20		7		
-	User Accounts	Kernel Services - A&P	3.4.3.3.21		5		
-	Default Display Screen	Kernel Services - A&P	3.4.3.3.22		5		
-	Select Display Font	Kernel Services - A&P	3.4.3.3.23		5		
-	Segment Installer	Kernel Services - Installation	3.4.3.4.1	placeholder for ability to install segments on target platform in a later phase (COEInstaller)	5		
1	Real-time Clock Services	Kernel Services - Time	3.4.3.5.1	DII COE does not currently provide any APIs in this area. The current or next release of lynxOS will/does provide POSIX compliant APIs for these services. As such, DII COE will use these POSIX compliant services directly.	8,12	X	[Note 13]
1	Resolution and accuracy	Kernel Services - Time	3.4.3.5.2.*	DII COE does not currently provide any APIs in this area. The current or next release of lynxOS will/does provide POSIX compliant APIs for these services. As such, DII COE will use these POSIX compliant services directly.	8,12	X	[Note 13]
1	Clock Synchronization	Kernel Services - Time	3.4.3.5.3	DII COE does not currently provide any APIs in this area. The current or next release of lynxOS will/does provide POSIX compliant APIs for these services. As such, DII COE will use these POSIX compliant services directly.	8,12	X	[Note 13]
1	Coexistence with Non-Real-time Clocks	Kernel Services - Time	3.4.3.5.4	DII COE does not currently provide any APIs in this area. The current or next release of lynxOS will/does provide POSIX compliant APIs for these services. As such, DII COE will use these POSIX compliant services directly.	8,12	X	[Note 13]

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1	Timers	Kernel Services - Time	3.4.3.5.5	DII COE does not currently provide any APIs in this area. The current or next release of lynxOS will/does provide POSIX compliant APIs for these services. As such, DII COE will use these POSIX compliant services directly.	8,12	X	[Note 13]
1	Actions	Kernel Services - Time	3.4.3.5.6	Currently under investigation	8,12	X	[Note 13]
-	Hardware Support	Kernel Services - Time	3.4.3.5.7	not part of 5.0 beta			
NOTES							
(all)	Attempts have been made to identify and include all requirements. If requirements are not mentioned it is assumed that the capability will not be provided in the 5.0 beta deliver						
1	DISA direction is not to build an integration platform, RT TWG direction is not to install software on target. Only remaining alternative is to have all RT segments delivered as tool kits with no DISA integration support.						
2	Unclear what the RT COE Segment Installer would do if we support neither installation on the target, nor installation on an integration machine (see note #1)						
3	kernel services will likely be repackaged into a number of smaller units. Dependency must be on one of these units, not on the low level shared library						
4	Definition may need to be expanded to include fundamental components of the O/S which are NOT POSIX UoF - e.g., TCP. Unclear whether DISA will support this extension.						
5	Requirements listed as being under development						
6	Not listed in current requirements documents, but must be provided if RT O/S supports						
7	The corresponding functionality has been deprecated in DII COE 4.x and will likely not be provided in DII COE 5.x releases						
8	Limited to local machine configuration only. 5.x kernel will not provide cross machine configuration/synchronization capabilities						
9	Not currently provided by DII COE as a callable API. Information is available in CDS (or equivalent)						
10	Priority level is unclear since underlying service may not be provided (see note #1)						
11	Ability to derive required services is based solely on the information provided by each segment in their SegInfo file and stored						
12	OS vendor is responsible for all POSIX compliance issues. DISA will not provide POSIX APIs if the vendor does not.						
13	DISA commits to building and testing a Real-time DII COE Kernel to execute in a PSE54 environment. DISA design guidance is to design these functions to also work in a PSE52 environment. DISA will not verify (test) proper operation in a PSE52 environment.						
14	DISA may not have the configuration analysis tool available by the March 27, 2000 delivery of the Beta. Will be available by next release.						